

CLAIMS

Please amend claims 1, 3, 4, 5, 6, 8, 20, 24, 32, and 34, and cancel claims 7, 10-13, 15, 16, 18, 19, 21, 25-31 and 35-37 as shown below.

1. (Currently amended) A composition comprising a synthetic oligonucleotide consisting of ~~about 25 to about 40~~ nucleotides that hybridizes specifically to a ~~pagA target sequence contained in a *B. anthracis*~~ pagA target sequence selected from the group consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is ~~sequences fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA equivalents equivalent of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA~~ sequences ~~sequences that is fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24. the sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein at least one oligonucleotide is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.~~

2. (Canceled)

3. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence ~~contained in SEQ ID NO:21~~ consists of SEQ ID NO:1 or SEQ ID NO:2.

4. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence ~~contained in SEQ ID NO:22~~ consists of SEQ ID NO:3 or SEQ ID NO:4.

5. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence ~~contained in SEQ ID NO:23~~ consists of SEQ ID NO:5 or SEQ ID

NO:6.

6. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence ~~contained in SEQ ID NO:24~~ consists of SEQ ID NO:7 or SEQ ID NO:8.

7. (Canceled)

8. (Withdrawn - Currently amended) The composition of claim 1 further comprising a *capB*-specific synthetic 7 wherein the oligonucleotide that hybridizes specifically to a the *capB* target sequence, wherein the *capB*-specific oligonucleotide consists of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13 or SEQ ID NO:14.

9.-13. (Canceled)

14. (Previously presented) The composition of claim 1, wherein the synthetic oligonucleotide has a DNA or RNA backbone, or mixed DNA and RNA backbone, or contains at least one 2'-methoxy RNA group linking the bases.

15.-16. (Canceled)

17. (Previously presented) The composition of claim 1, wherein the synthetic oligonucleotide has a signal-producing label linked directly or indirectly to the oligonucleotide.

18.-19. (Canceled)

20. (Withdrawn - Currently amended) A method of detecting *B. anthracis* nucleic acid in a sample comprising the steps of:

providing a sample containing *B. anthracis* nucleic acids;

providing a *pagA*-specific ~~at least one~~ probe that hybridizes specifically to a *pagA* target sequence contained in a ~~pXO1~~ plasmid, wherein the *pagA*-specific ~~probe that hybridizes specifically to the *pagA* target sequence~~ is a synthetic oligonucleotide of ~~about 25 to about 40 nucleotides that hybridizes specifically to a sequence selected from the group contained in the *pagA* target sequence~~ consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is ~~sequences~~ fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA equivalents ~~equivalent of~~ SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA sequences ~~sequence that is~~ fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24; a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein at least one oligonucleotide that hybridizes to the *pagA* target sequence is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8;

hybridizing specifically at least one *pagA*-specific probe to the *pagA* target sequence; and

detecting the presence of at least one *pagA*-specific probe hybridized to the *pagA* target sequence to indicate the presence of *B. anthracis* in the sample.

21.-23. (Canceled)

24. (Withdrawn - Currently amended) The method of claim 20 further comprising a ~~21, wherein the at least one *capB*-specific probe specific for a *capB* target sequence is a synthetic oligonucleotide~~ consisting of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, or SEQ ID NO:14.

25.-31. (Canceled)

32. (Currently amended) A kit comprising ~~at least one~~ a synthetic oligonucleotide consisting of ~~about 25 to about 40 nucleotides that hybridizes specifically to a sequence contained in a *B.anthraxis pagA* target sequence~~ selected from the group consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ

~~ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is~~ sequences fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, ~~a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA~~ equivalents ~~equivalent of~~ SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and ~~a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA~~ sequences ~~sequence that is~~ fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, ~~the sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein the~~ at least one synthetic oligonucleotide is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.

33. (Canceled)

34. (Currently amended) The kit of claim 32, further comprising a *capB*-specific probe ~~at least one synthetic oligonucleotide consisting of SEQ ID NO: 9, 10, 11, 12, 13 or 14, that hybridizes specifically to a *capB* target sequence of *B. anthracis*.~~

35.-37. (Canceled)